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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/518,351	08/30/2005	Susumu Kuno	8062-1025	8200				
<div>466 7590 12/18/2007 YOUNG &amp; THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202</div>								
<div>EXAMINER SAUCIER, SANDRA E</div>								
<table border="1"><thead><tr><th>ART UNIT</th><th>PAPER NUMBER</th></tr></thead><tbody><tr><td>1651</td><td></td></tr></tbody></table>					ART UNIT	PAPER NUMBER	1651	
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<table border="1"><thead><tr><th>MAIL DATE</th><th>DELIVERY MODE</th></tr></thead><tbody><tr><td>12/18/2007</td><td>PAPER</td></tr></tbody></table>					MAIL DATE	DELIVERY MODE	12/18/2007	PAPER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/518,351	<b>Applicant(s)</b> KUNO ET AL.	
	<b>Examiner</b> Sandra Saucier	<b>Art Unit</b> 1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 41-79 is/are pending in the application.
- 4a) Of the above claim(s) 78 and 79 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 41-77 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/17/04, 11/08/06</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

Claims 41-79 are pending. Claims 41-77 are considered on the merits. Claims 78, 79 are withdrawn from consideration as being drawn to a non-elected invention.

***Election/Restriction***

Claims 78, 79 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made without traverse in Paper No. 10/23/07.

***Information Disclosure Statement***

The information disclosure statement (IDS) does not comply with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 112***

**INDEFINITE**

Claims 43, 45, 47, 48, 51, 58, 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 43 should state "molar content ratio". A content ratio based on weight would not be the same.

Claim 45 should state "from 3 wt% to less than 50 wt%". The claim now has conflicting limits since "or more" is unbounded. Likewise claims 48, 58, 59 suffer from the same defect.

Please check claim 47 for the symbol for solubility factor. Solubility depends on solvent and temperature. The term "solubility factor" may be a term of art with an inherent definition of temperature and solvent with respect to polymerization chemistry, but is it unknown to the examiner. Please clarify.

Claim 51, line 3 has undefined symbols.

Claim 59 is directed to a structure, but has no structural relationship to the previously defined structures. This is an omission of an essential structural element.

Please consider the claim below suggested by the examiner in order to clarify the composition and make the claims more easily interpretable.

41. A selective leukocyte removal filter comprising:  
a biocompatible polymer and  
a supporting body,  
wherein the biocompatible polymer is polymerized from units comprising  
8–45 mol% of a polymerizable monomer having a polyalkylene oxide chain,  
30–90 mol% of a polymerizable monomer having a hydrophobic group and  
2–50 mol% of a polymerizable monomer having a hydroxyl group, and  
wherein the biocompatible polymer is present on at least a surface of the supporting  
body.

***Claim Rejections – 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent, (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 41–77 rejected under 35 U.S.C. 102(a) as being clearly anticipated by WO 03/033053 [N].

The claims are directed to a selective leukocyte removal filter comprising:  
a biocompatible polymer and  
a supporting body,

wherein the biocompatible polymer is polymerized from units comprising 8–45 mol% of a polymerizable monomer having a polyalkylene oxide chain, 30–90 mol% of a polymerizable monomer having a hydrophobic group and 2–50 mol% of a polymerizable monomer having a hydroxyl group, and wherein the biocompatible polymer is present on at least a surface of the supporting body.

WO 03/033053 discloses a filter comprising a polymer of 2-hydroxyisobutyl methacrylate, methoxydiethylene glycol methacrylate and methyl methacrylate in a molar ratio of 5–40 to 5–30 to 40–60, respectively on a support. Filters useful to remove leucocytes from blood are made from this material, see claims.

Claims 41–43, 45–77 rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 5,407,581 [A].

US 5,407,581 disclose in example 20 a polymer formed from 1,2-hydroxy methacrylate, methyl methacrylate, and methacrylic acid in a molar ratio of 17–10–1. The polymer coats a polyester non-woven fabric having a fiber diameter of 1.7microm.

### ***Claim Rejections – 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 41–77 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/033053 [N].

Claims 41–43, 45–77 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,407,581 [A] or JP 2001–300221 [O].

The claims and WO 03/033053, US 5,407,581 have been discussed above.

JP 2001-300221 discloses a filter material comprising:

a polymer comprising Me methacrylate, 2-isocyanatoethyloxy methacrylate, 2-hydroxyethyl methacrylate and a support. The exemplified ratio in example 1 is 97:3:10 by weight. In the absence of criticality, difference in the concentrations of the monomers is an element of experimental design.

To the extent that the ranges of the cited prior art filter differ from the claimed ranges, these range differences are considered to be optimization of parameters and within the purview of one of ordinary skill in the art.

One of ordinary skill in the art would have been motivated at the time of invention to make these optimizations in order to obtain the resulting composition as suggested by the references with a reasonable expectation of success. The claimed subject matter fails to patentably distinguish over the state of the art as represented by the cited references. Therefore, the claims are properly rejected under 35 U.S.C. § 103.

### ***Conclusion***

Applicant should specifically point out the support for any amendments made to the disclosure, including the claims (MPEP 714.02 and 2163.06). It is applicants' burden to indicate how amendments are supported by the ORIGINAL disclosure. Due to the procedure outlined in MPEP 2163.06 for interpreting claims, it is noted that other art may be applicable under 35 USC 102 or 35 USC 103(a) once the aforementioned issue(s) is/are addressed.

Applicant is requested to provide a list of all copending applications that set forth similar subject matter to the present claims. A copy of such copending claims is requested in response to the office action.

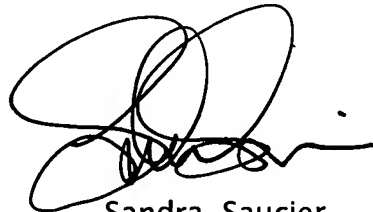
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra Saucier whose telephone number is (571) 272-0922. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, M. Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Sandra Saucier', with a large, stylized initial 'S'.

Sandra Saucier  
Primary Examiner  
Art Unit 1651